





# Antenna Pattern of 2.4GHz and 5GHz UNII 1~3

# Appendix D

Theta	-12.74/-11.69	-10.47/8.98	-8.27/-7.41	-6.06/9.63	-10.93/-10.42	-9.18/8.05	-7.45/-1.75	-7.67/-7.00	-6.85/8.22	-10.10/9.80	-8.46/-8.37	-9.45/-9.91	-9.18/8.80	-9.56/-10.80	-11.15/10.44	-9.99/8.62	-7.69/6.58	-5.47/4.63	-4.30/-4.20	-4.32/-4.72	-4.26/4.78	-6.13/7.00	-8.18/10.25	-12.17/13.60
Phi	-14.78/-10.36	-7.85/-6.39	-5.91/-7.22	-8.39/-8.29	-7.19/-6.51	-5.98/-5.78	-6.21/-6.39	-6.14/-5.86	-6.49/-8.78	-9.95/8.66	-7.71/-7.77	-8.87/8.33	-6.01/-4.94	-5.27/-5.53	-7.96/-9.06	-10.44/-10.20	-10.36/-9.58	-9.05/8.75	-7.09/-5.43	-4.23/-3.72	-3.51/-3.04	-3.48/-3.90	-4.26/-4.19	-8.69/-12.66
Theta	12.74/11.69	10.47/8.98	8.27/7.41	6.06/9.63	10.93/10.42	9.18/8.05	7.45/1.75	7.67/7.00	6.85/8.22	10.10/9.80	8.46/8.37	9.45/9.91	9.18/8.80	9.56/10.80	11.15/10.44	9.99/8.62	7.69/6.58	5.47/4.63	4.30/4.20	4.32/4.72	4.26/4.78	6.13/7.00	8.18/10.25	12.17/13.60
Phi	14.78/10.36	7.85/6.39	5.91/7.22	8.39/8.29	7.19/6.51	5.98/5.78	6.21/6.39	6.14/5.86	6.49/8.78	9.95/8.66	7.71/7.77	8.87/8.33	6.01/4.94	5.27/5.53	7.96/9.06	10.44/10.20	10.36/9.58	9.05/8.75	7.09/5.43	4.23/3.72	3.51/3.04	3.48/3.90	4.26/4.19	8.69/12.66
Theta	14.78/10.36	7.85/6.39	5.91/7.22	8.39/8.29	7.19/6.51	5.98/5.78	6.21/6.39	6.14/5.86	6.49/8.78	9.95/8.66	7.71/7.77	8.87/8.33	6.01/4.94	5.27/5.53	7.96/9.06	10.44/10.20	10.36/9.58	9.05/8.75	7.09/5.43	4.23/3.72	3.51/3.04	3.48/3.90	4.26/4.19	8.69/12.66
Theta	14.78/10.36	7.85/6.39	5.91/7.22	8.39/8.29	7.19/6.51	5.98/5.78	6.21/6.39	6.14/5.86	6.49/8.78	9.95/8.66	7.71/7.77	8.87/8.33	6.01/4.94	5.27/5.53	7.96/9.06	10.44/10.20	10.36/9.58	9.05/8.75	7.09/5.43	4.23/3.72	3.51/3.04	3.48/3.90	4.26/4.19	8.69/12.66
Theta	0(0)	15(15)	30(30)	45(45)	60(60)	75(75)	90(90)	105(105)	120(120)	135(135)	150(150)	165(165)	180(180)	195(195)	210(210)	225(225)	240(240)	255(255)	270(270)	285(285)	300(300)	315(315)	330(330)	345(345)
Gain	0(0)	15(15)	30(30)	45(45)	60(60)	75(75)	90(90)	105(105)	120(120)	135(135)	150(150)	165(165)	180(180)	195(195)	210(210)	225(225)	240(240)	255(255)	270(270)	285(285)	300(300)	315(315)	330(330)	345(345)
Gain	0(0)	15(15)	30(30)	45(45)	60(60)	75(75)	90(90)	105(105)	120(120)	135(135)	150(150)	165(165)	180(180)	195(195)	210(210)	225(225)	240(240)	255(255)	270(270)	285(285)	300(300)	315(315)	330(330)	345(345)





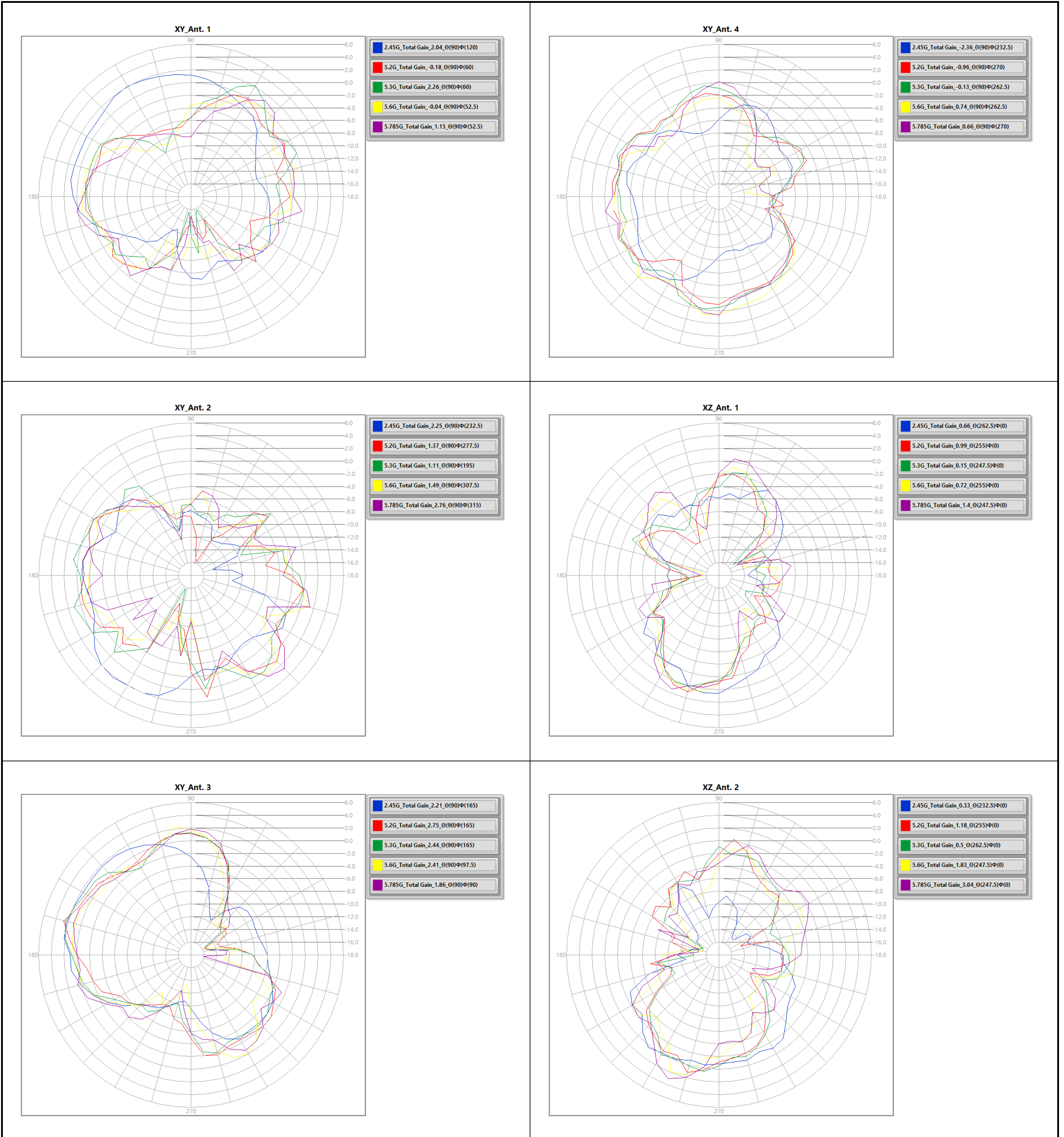


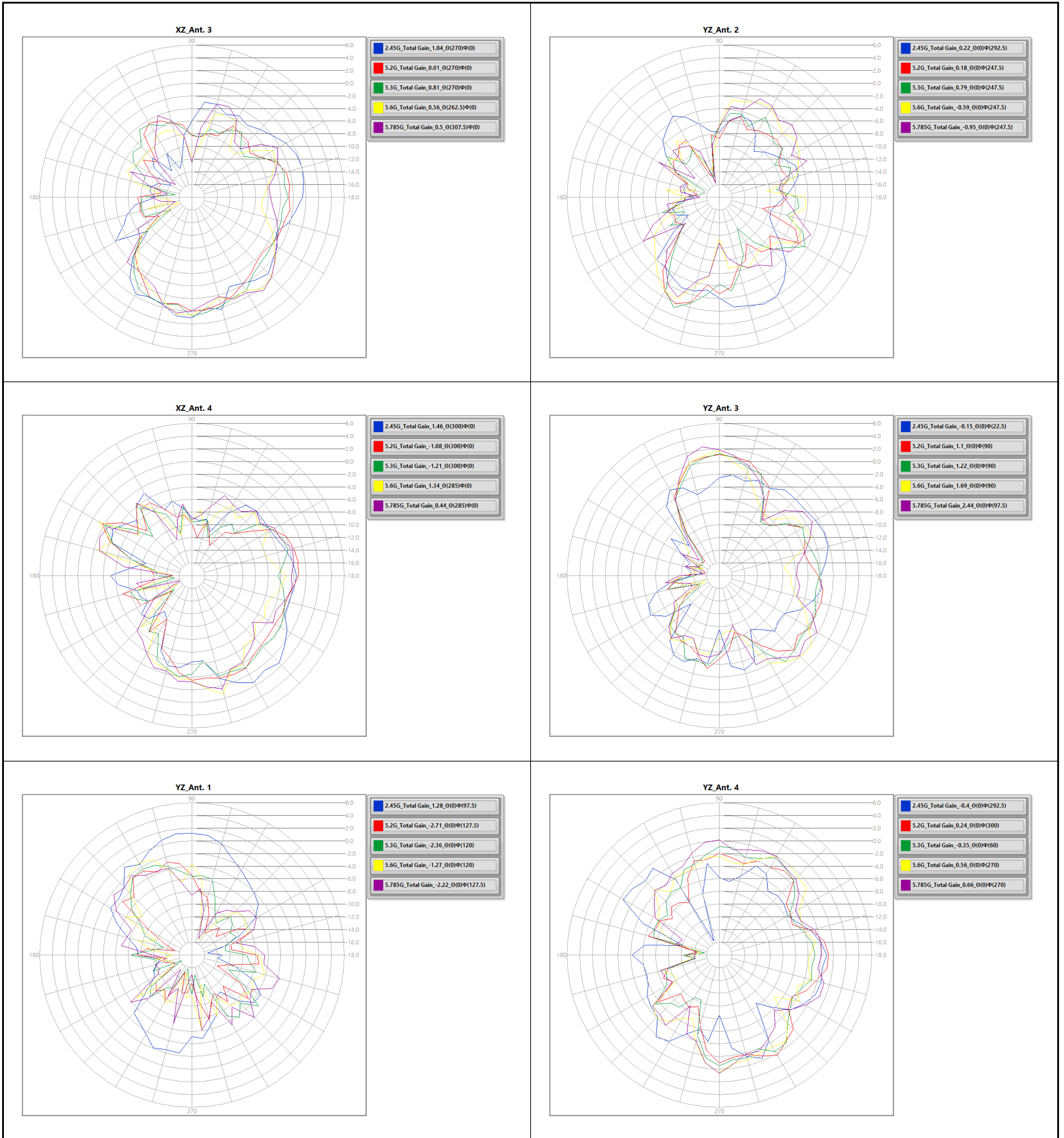
Antenna Pattern of 2.4GHz and 5GHz UNII 1~3

Appendix D

Table with 25 columns representing frequency channels (e.g., 804/908, 1000/1017) and 25 rows representing elevation angles (e.g., 0, 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 110, 120, 130, 140, 150, 160, 170, 180). Each cell contains a numerical value representing the antenna gain or power density in that direction.

E1(XY plane) –  $\Theta(90)\Phi(0-360)$   
 E2(XZ plane) –  $\Theta(0-180)\Phi(0)$  and  $\Theta(0-180)\Phi(180)$   
 E3(YZ plane) –  $\Theta(0-180)\Phi(90)$  and  $\Theta(0-180)\Phi(270)$









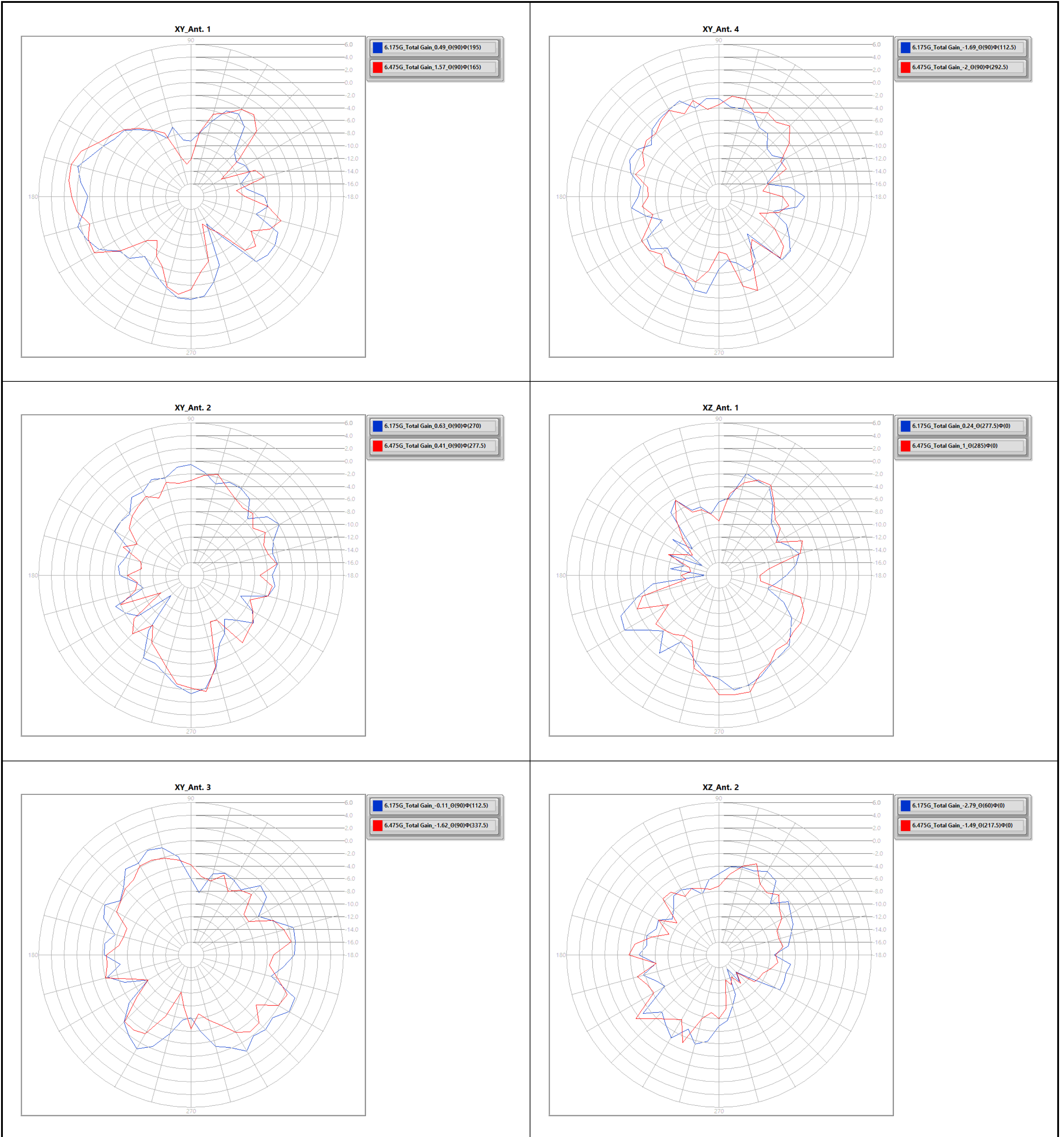


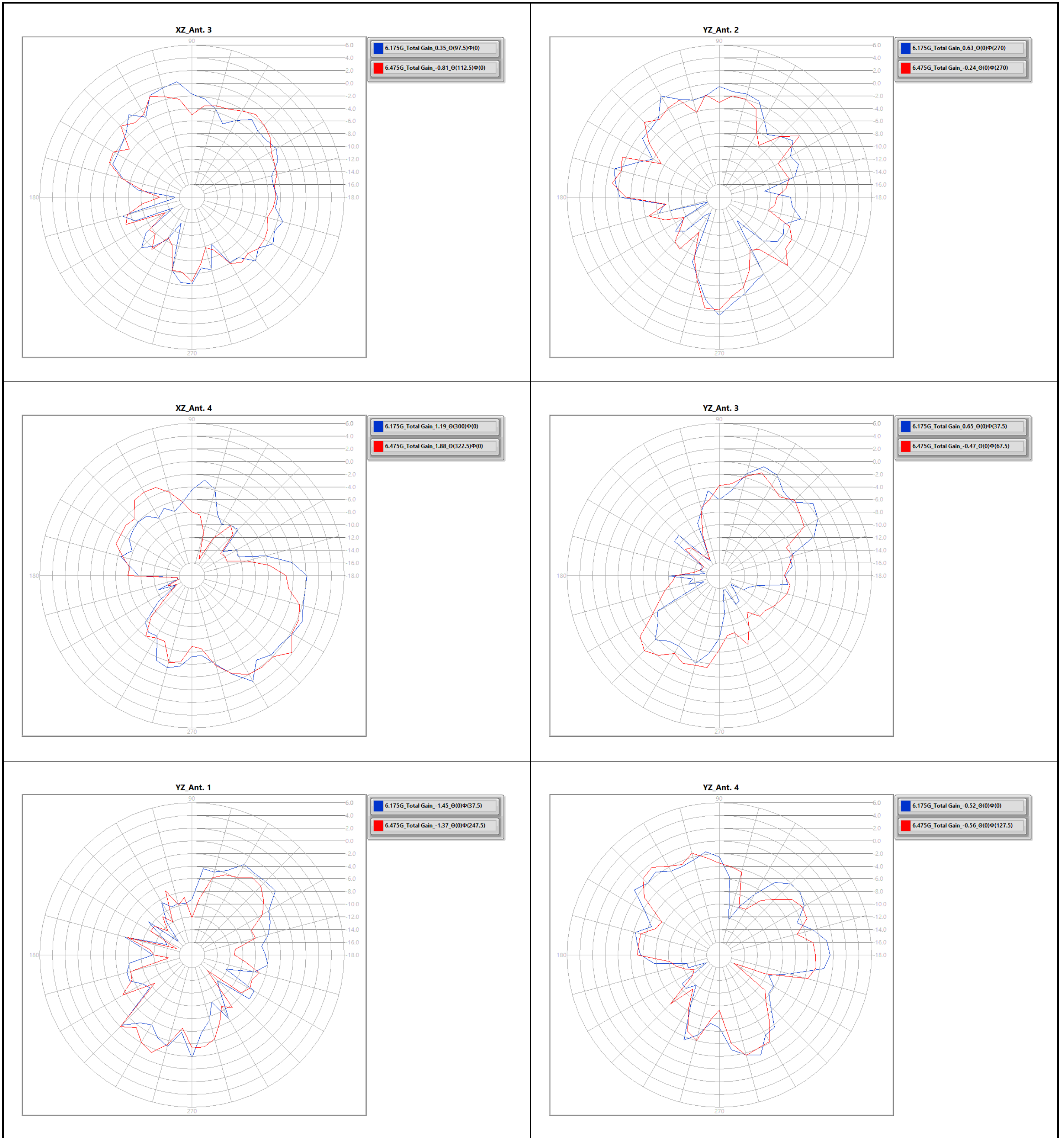
# Antenna Pattern of 6GHz UNII 5~6

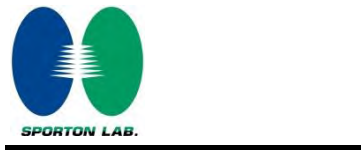
# Appendix E

Theta (°)	Phi (°)	Phi(15°)	Phi(30°)	Phi(45°)	Phi(60°)	Phi(75°)	Phi(90°)	Phi(105°)	Phi(120°)	Phi(135°)	Phi(150°)	Phi(165°)	Phi(180°)	Phi(195°)	Phi(210°)	Phi(225°)	Phi(240°)	Phi(255°)	Phi(270°)	Phi(285°)	Phi(300°)	Phi(315°)	Phi(330°)	Phi(345°)
Theta(15°)	-5.02/4.56	-4.36/4.23	-4.89/4.95	-5.52/5.90	-5.88/6.19	-6.24/6.59	-6.55/6.21	-6.15/6.42	-5.71/5.54	-5.69/5.63	-5.25/4.48	-3.84/3.39	-3.16/3.05	-3.02/3.01	-3.29/3.84	-4.59/5.60	-6.45/7.40	-8.68/9.95	-11.85/13.06	-14.73/13.95	-11.45/9.72	-7.86/7.08	-6.68/6.54	-5.95/5.12

E1(XY plane) –  $\Theta(90)\Phi(0-360)$   
 E2(XZ plane) –  $\Theta(0-180)\Phi(0)$  and  $\Theta(0-180)\Phi(180)$   
 E3(YZ plane) –  $\Theta(0-180)\Phi(90)$  and  $\Theta(0-180)\Phi(270)$







# Antenna Pattern of 6GHz UNII 7~8

# Appendix F

## Total Gain Data

Freq(Hz)	6.695GPol	TotalAnt.1	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99
Gain	Φ(0°)Φ(7.5°)	Φ(15°)Φ(22.5°)	Φ(30°)Φ(37.5°)	Φ(45°)Φ(52.5°)	Φ(60°)Φ(67.5°)	Φ(75°)Φ(82.5°)	Φ(90°)Φ(97.5°)	Φ(105°)Φ(112.5°)	Φ(120°)Φ(127.5°)	Φ(135°)Φ(142.5°)	Φ(150°)Φ(157.5°)	Φ(165°)Φ(172.5°)	Φ(180°)Φ(187.5°)	Φ(195°)Φ(202.5°)	Φ(210°)Φ(217.5°)	Φ(225°)Φ(232.5°)	Φ(240°)Φ(247.5°)	Φ(255°)Φ(262.5°)	Φ(270°)Φ(277.5°)	Φ(285°)Φ(292.5°)	Φ(300°)Φ(307.5°)	Φ(315°)Φ(322.5°)	Φ(330°)Φ(337.5°)	Φ(345°)Φ(352.5°)																																																																														
6.695GPol	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99		
Gain	Φ(0°)Φ(7.5°)	Φ(15°)Φ(22.5°)	Φ(30°)Φ(37.5°)	Φ(45°)Φ(52.5°)	Φ(60°)Φ(67.5°)	Φ(75°)Φ(82.5°)	Φ(90°)Φ(97.5°)	Φ(105°)Φ(112.5°)	Φ(120°)Φ(127.5°)	Φ(135°)Φ(142.5°)	Φ(150°)Φ(157.5°)	Φ(165°)Φ(172.5°)	Φ(180°)Φ(187.5°)	Φ(195°)Φ(202.5°)	Φ(210°)Φ(217.5°)	Φ(225°)Φ(232.5°)	Φ(240°)Φ(247.5°)	Φ(255°)Φ(262.5°)	Φ(270°)Φ(277.5°)	Φ(285°)Φ(292.5°)	Φ(300°)Φ(307.5°)	Φ(315°)Φ(322.5°)	Φ(330°)Φ(337.5°)	Φ(345°)Φ(352.5°)																																																																														
6.695GPol	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99		
Gain	Φ(0°)Φ(7.5°)	Φ(15°)Φ(22.5°)	Φ(30°)Φ(37.5°)	Φ(45°)Φ(52.5°)	Φ(60°)Φ(67.5°)	Φ(75°)Φ(82.5°)	Φ(90°)Φ(97.5°)	Φ(105°)Φ(112.5°)	Φ(120°)Φ(127.5°)	Φ(135°)Φ(142.5°)	Φ(150°)Φ(157.5°)	Φ(165°)Φ(172.5°)	Φ(180°)Φ(187.5°)	Φ(195°)Φ(202.5°)	Φ(210°)Φ(217.5°)	Φ(225°)Φ(232.5°)	Φ(240°)Φ(247.5°)	Φ(255°)Φ(262.5°)	Φ(270°)Φ(277.5°)	Φ(285°)Φ(292.5°)	Φ(300°)Φ(307.5°)	Φ(315°)Φ(322.5°)	Φ(330°)Φ(337.5°)	Φ(345°)Φ(352.5°)																																																																														
6.695GPol	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99		
Gain	Φ(0°)Φ(7.5°)	Φ(15°)Φ(22.5°)	Φ(30°)Φ(37.5°)	Φ(45°)Φ(52.5°)	Φ(60°)Φ(67.5°)	Φ(75°)Φ(82.5°)	Φ(90°)Φ(97.5°)	Φ(105°)Φ(112.5°)	Φ(120°)Φ(127.5°)	Φ(135°)Φ(142.5°)	Φ(150°)Φ(157.5°)	Φ(165°)Φ(172.5°)	Φ(180°)Φ(187.5°)	Φ(195°)Φ(202.5°)	Φ(210°)Φ(217.5°)	Φ(225°)Φ(232.5°)	Φ(240°)Φ(247.5°)	Φ(255°)Φ(262.5°)	Φ(270°)Φ(277.5°)	Φ(285°)Φ(292.5°)	Φ(300°)Φ(307.5°)	Φ(315°)Φ(322.5°)	Φ(330°)Φ(337.5°)	Φ(345°)Φ(352.5°)																																																																														



E1(XY plane) –  $\Theta(90)\Phi(0-360)$   
 E2(XZ plane) –  $\Theta(0-180)\Phi(0)$  and  $\Theta(0-180)\Phi(180)$   
 E3(YZ plane) –  $\Theta(0-180)\Phi(90)$  and  $\Theta(0-180)\Phi(270)$

